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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,807	10/27/2003	Naoya Kamiyama	117597	9678

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EXAMINER	
CRAIG, DWIN M	

ART UNIT	PAPER NUMBER
2123	

MAIL DATE	DELIVERY MODE
10/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/692,807	KAMIYAMA, NAOYA	
	Examiner	Art Unit	
	DWIN M. CRAIG	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/3/2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-8,10 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-8,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/10/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 5, 6, 7, 8, 10 and 11 have been presented for reconsideration based on the newly presented amended claim language and Applicants' arguments.

Response to Arguments

2. Applicants' arguments presented in the 9/10/2008 responses have been fully considered; the Examiner's response is as follows:

2.1 Applicants' have argued on page -10- of the 9/10/2008 responses;

"Nimmo does not disclose an event data storage section for storing into the storing section as event data, a time when a setting operation is carried out; a value of the data at that time; and information about the data, only when the setting operation of the data throughout the output data setting section is detected by a micro computer. In this regard, we believe that the Office Action fails to give weight to each of the specifically recited claim features. Further, we note that the Office Action does not apparently address the feature of wherein the event playback section starts playing back the setting operation automatically when predetermined data is detected, as recited in claim 1."

In view of the newly amended claim language and the newly presented arguments regarding for the requirement for a teaching of event data that contains a value of data at a specific time, as expressly claim in independent claim 1, the Examiner is now required to give weight to this specific limitation, therefore, the previously applied prior art rejections are hereby withdrawn. Further and in regards to the claim interpretation as applied to Applicants' claims in the previous Office Action the Examiner notes that Apparatus is *configured* specifically to

perform the following functionality more specifically, that the event data is stored at a specific time with data, this is being interpreted to mean that there needs to be a time stamp and specific data is stored for that specific time stamp and then playback is initialed based on the event data during that time stamp.

An updated search based on Applicants' amended claim language and arguments has revealed new art.

Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 5, 6, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,535,620 to Nichols in view of U.S. Patent 5,717,869 to Moran et al.

As regards independent claims 1, 5, 6, and 11 and using claim 1 as an example, *Nichols* teaches, a simulation apparatus comprising (Figures 1 & 2 and the descriptive text): an output data setting section for setting data (Col. 2 lines 32-50 and Col. 2 lines 57-67 "…user defined inputs to the engine management system jointly control the engine" and Col. 4 lines 45-67 and Col. 5 lines 1-10 and Col. 5 lines 18-38 "This flag is generated based on user supplied input as to the cycle pattern for the test…" data is being set based on the user input and this is output data because the data being set creates a simulated *exhaust* or output condition, see Col. 5 line 6 "…simulated exhaust gas signals…"),

which is output to a control target during execution of simulation (Col. 5 lines 25-27 "…the engine control module or engine management system controls the injectors…" see also Col. 6 lines 9-37); a data output section for supplying the control target with output data created on the basis of the data set through the output data setting section (Col. 6 lines 23-65 the ignition control signals based on the simulated input are controlling the engine and the simulated exhaust gases are an output that is the basis for the result of the simulation).

However *Nichols* does not expressly disclose, a storage section; an event data storage section and an event playback section.

Moran et al. teaches, a storage section see, an event data storage section, which further includes a method of setting event data, see Figure 1 item 103 and as regards an event storage including a time stamp, which is being interpreted to mean that there is "*a value of the data at the time*", as expressly claimed, see Col. 3 lines 1-50, more specifically, "…Events are used to create indices which provide direct access to a point or span in time which provide direct access to a point in time during collaborative activity…", the collaborative activity is the *data* at the specific *time*, i.e. at the time stamp, see also Col. 6 lines 35-60 and as regards control or automatic playback see the description of playback controllers in Col. 6 and further see Col. 14 lines 27-31. In Applicants' instant case and as relates to transferring data to the *target device* in would have been obvious to an artisan of ordinary skill to provide a method of replaying specific behavior of the target device because of the ability to go directly to a portion of the recording that is of interest, see also, Figure 1 item 107 "Playback Controllers" as well as Figure 5 and item 101 in Figure 1.

Nichols and *Moran et al.* are analogous art because they both come from the same problem solving area of simulation systems.

At the time of the invention, it would have been obvious to a person of ordinary skill to used the playback apparatus of *Moran et al.* with the data setting apparatus of *Nichols*.

The suggestion for doing so is disclosed in *Moran et al.* Col. 8 lines 18-45 which discloses that different media types can be used with the programmable playback systems, such as systems as disclosed in *Nichols*. Further, it would have been obvious to an artisan of ordinary skill to have added the ability to *playback* a specific event in order to aid in the repair and/or analysis of a complex control system as disclosed in *Nichols*. The ability to *repeat* the conditions

of the system in order to determine the state of the system, at the time of an event, such a failure would motivate an artisan of ordinary skill to use the methods of *Moran et al.* in order to better understand the functionality of the system in *Nichols*.

Therefore, it would have been obvious to combine *Moran et al.* with *Nichols* in order to obtain the invention in claims 1, 5, 6 and 7.

3.2 As regards the limitation in independent claim 5 of having as a part of the apparatus a *waiting time setting section* see *Moran et al.* Figure 3 and Figure 5 item 509 which clearly teaches that a specific event is set to begin at a specific time or time stamp, see also Figure 6 item 607 and the section of *Moran et al.* which teaches waiting for the user input, see Figure 3 item 307 "Adjust Playback" as well as Figures 15-20 and the descriptive text.

3.3 As regards the limitation in claim 6 of having a playback number setting section, *Moran et al.* the examiner has interpreted this limitation to mean that the playback apparatus has a mechanism to set a save point, see *Moran et al.* Item 101 "Capture Session Start-up Module" in Figure 1, which would be used to start up a session at a "save point" as regards the teaching of a "save point" this is being interpreted to be an event point, which *Moran et al.* teaches, see above.

3.4 As dependent claim 7, *Moran et al.* teaches, *an event data editing section* Col. 14 lines 49-60 see also Figure 3 item 308.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,535,620 to Nichols in view of U.S. Patent 5,717,869 to Moran et al. and in further view of U.S. Patent 6,625,789 to Ara et al.

4.1 Regarding claim 8, *Nichols* teaches, a simulation apparatus comprising (Figures 1 & 2 and the descriptive text): an output data setting section for setting data (Col. 2 lines 32-50 and Col. 2 lines 57-67 "…user defined inputs to the engine management system jointly control the engine" and Col. 4 lines 45-67 and Col. 5 lines 1-10 and Col. 5 lines 18-38 "This flag is generated based on user supplied input as to the cycle pattern for the test…" data is being set based on the user input and this is output data because the data being set creates a simulated *exhaust* or output condition, see Col. 5 line 6 "…simulated exhaust gas signals…"),

which is output to a control target during execution of simulation (Col. 5 lines 25-27 "…the engine control module or engine management system controls the injectors…" see also Col. 6 lines 9-37); a data output section for supplying the control target with output data created on the basis of the data set through the output data setting section (Col. 6 lines 23-65 the ignition control signals based on the simulated input are controlling the engine and the simulated exhaust gases are an output that is the basis for the result of the simulation).

However *Nichols* does not expressly disclose, a storage section; an event data storage section and an event playback section and a signal waveform editing section.

Moran et al. teaches, a storage section an event data storage section, which further includes a method of setting event data, and an event playback section, see the rejection above.

Ara et al. teaches a waveform editor, see Figures 15 & 16 and the descriptive text more specifically, Col. 16 lines 53-67 more specifically, "… a waveform editor program whereas a user has a web browser connected to the server by a network. The user activates the waveform editor program on the web browser and enters the desired series of signals to the server through the editor…"

Nichols, Ara et al. and *Moran et al.* are analogous art because they all come from the same problem solving area of simulation.

At the time of the invention, it would have been obvious to a person of ordinary skill to used the playback apparatus of *Moran et al.* with the data setting apparatus of *Nichols* and with the waveform editing teachings of *Ara et al.*

The suggestion for doing so would have been to provide an interactive tool for editing interactive event recording sessions, see *Moran et al.* Figures 1-13 and the descriptive text regarding these figures. As regards the motivation to modify *Nichols* with the waveform editor teachings of *Ara et al.*, an artisan of ordinary skill would have been motivated to provide a simple to use method of generating stimulus signals to the control target of the simulation in order to provide a method of "bit banging" specific data pins on the target hardware to determine if the programmed functionality was erroneous or not.

Further and in regards to the requirement for a teaching, suggestion and/or motivation please see *Dann v. Johnson,* 425 U.S. 219, 189 USPQ 257 (1976) and *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.,* --F.3d--, 82 USPQ2d 1687 (Fed. Cir. 2007) as well as *KSR International Co. v. Teleflex Inc.,* 550 U.S. --, 82 USPQ2d 1385 (2007). The cited cases recently decided by the Federal Circuit Court as well as the U.S. Supreme Court clearly set forth that the references themselves do not have to expressly disclose a teaching, suggestion or motivation to combine references in an obviousness type of art rejection.

Therefore, it would have been obvious to combine *Moran et al.* and *Ara et al.* with *Nichols* in order to obtain the invention in claim 8.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Nichols* in view of *Moran et al.* as applied to claim 7 above and in further view of U.S. Patent 5,794,005 to Steinman.

5.1 *Nichols* as modified by *Moran et al.* teaches a simulation system with simulation event editing and playback ability as applied to claim 7 above in that their combined teaching lacks,

(claim 10) the event editing section includes a text editing section.

Steinman teaches a text editor used to modify a simulation object that can be used for playback see (Col. 8 lines 5-14).

Nichols as modified by *Moran et al.* and *Steinman* are analogous art because they are both related to simulation.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made, to utilize a text editor in a simulator with playback ability so that portions of the simulation can be annotated for future review an "what if" analysis. Such a suggestion can be found in *Steinman* Col. 8 Lines 12-14.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DWIN M. CRAIG whose telephone number is (571)272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3710.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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